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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,456	07/11/2003	John C. Opic	60458.00003	3860
23619 7590 01/16/2007 SQUIRE SANDERS & DEMPSEY LLP TWO RENAISSANCE SQUARE, 40 NORTH CENTRAL AVENUE SUITE 2700 PHOENIX, AZ 85004-4498			EXAMINER SAM, CHARLES H	
			ART UNIT 3731	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/16/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/618,456

Applicant(s)

OPIE ET AL.

Examiner

Charles H. Sam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-30 is/are allowed.
- 6) ☒ Claim(s) 1-27, 31-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/13/06</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,4-12,15-25,27,32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Dance et al. 5,078,723. Dance discloses a cutting device as claimed comprising a cutting head 56 having a leading edge 58 with annular cutting blade 35, an attachment section, and a body section having a distal end, a proximal end and an inner passage extending therethrough.

Regarding claim 4, Dance discloses the tubular body section 14.

Regarding claims 7,8,27 and 33 Dance discloses a helical structure 35.

Regarding claim 9, Dance discloses the endovascular component 18.

Regarding claim 10, Dance discloses the endovascular component comprising a flexible tube 12 and a medical guide wire 18.

Regarding claim 11, Dance discloses an endovascular component including one or more structures.

Regarding claim 12, Dance discloses the cutting head 56 pivoting when attached to the body section 14.

Regarding claim 15, Dance discloses an automatic advancement 35.

Regarding claim 16, Dance discloses an electric motor 74.

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Regarding claims 17-19, Dance discloses a cylindrical handle 60.

Regarding claim 20, Dance discloses an endovascular component 18 having a diameter smaller than the diameter of the tubular body member, a cutting tool having a tubular body section 14, a cutting head 56, and an opening extending through the cutting tool.

Regarding claim 21, Dance discloses an endovascular component 12 including an inner and outer section.

Regarding claim 22, Dance discloses a guide wire 18.

Regarding claim 23, Dance discloses a handle 60.

Regarding claim 24, Dance discloses an automatic advancement 35.

Regarding claim 32, Dance discloses a cutting tool comprising a cutting head 56, a body section 12 connected to the cutting head 56, and a structure 35 to assist in advancing the cutting tool.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dance et al. 5,078,723.

Regarding claims 13 and 14, the material such as steel and polycarbonate would have been obvious matter of design choice since applicant has not disclosed using steel or polycarbonate is for any specific purpose.

3. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dance et al. 5,078,723 in view of Sepetka et al. 5,551,443. Dance discloses the invention as claimed except for a coated surface. However, Sepetka et al. disclose in column 4, lines 46-65 a hydrophilic coating. It would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Dance by including a coating in view of Sepetka et al. to facilitate movement of the device through passageways.

4. Claims 2,26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dance et al. 5,078,723 in view of Bundy et al. 4,653,496. Dance discloses the invention as claimed except for a funnel-shape of the inner cavity of the cutting head. However, this funnel-shaped cavity is clearly disclosed by Bundy et al. as shown in figure 8. It would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Dance et al. by including a funnel-shaped cavity to the cutting head for providing an sharp cutting edge.

Regarding claim 31, Dance discloses a cutting head 56 having a leading edge 58 with annular cutting blade 35, an inner cavity and an attachment structure.

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5. Claims 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dance et al. 5,078,723 in view of Plaia et al. 5,084,010. Dance discloses the invention as claimed except for a threaded connection between the cutting head and body section. However, this lacking feature is disclosed by Plaia as shown in figures 5A and 5B, the threaded fitting 70 of the cutting head 62. It would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify Dance by including a threaded connection in view of Plaia et al. so that the cutting head can be removed from the body section.

***Allowable Subject Matter***

6. Claims 28-30 are allowed.

***Response to the Applicant Remarks***

7. The applicant arguments filed on 10/10/06 have been fully considered but they are not persuasive. With respect to the arguments in the first paragraph of page 8, the applicant should refer to the figure 4 of Dance et al. device that shows a cutting head 56 attached to a body section 53 having a distal end that couples to the cutting head. The arguments stating that "the office action fails to cite to any passage or figure in Dance that teaches these features" are not true since figures 1-3 and 5-7 indicate that the guide wire 18 and the torque cable 12 the longitudinal passage of the cutting device.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles H. Sam whose telephone number is (571) 272-4703. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C&

CS  
January 3, 2006

  
ANH TUAN T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
1/2/07.



10/6/94 436

The cited art is not seen to teach or suggest the features of independent claim 1, and in particular, is not seen to teach or suggest at least the features of a cutting head having an attachment section and a body section having a distal end operable to couple to the attachment section of the cutting head.

Dance relates to an atherectomy device for removing stenosis from arteries. (See Abstract). The Office Action cites to elements 56, 68 and 35 of Dance as teaching a cutting head, leading edge, and annular cutting blade, respectively. The Office Action goes on to contend that Dance also teaches a cutting head with an attachment section, and a body section with a distal end, a proximal end, and an inner passageway therethrough. However, the Office Action fails to cite to any passage or figure in Dance that teaches these features. Furthermore, the Office Action makes no mention of Dance teaching a distal end that is operable to couple to the attachment section of the cutting. The only reference to the construction of Dance's device with respect to a cutter head is found in column 3. There, Dance teaches that "[c]utter head 56 is preferably brazed to ribbon 53." (Column 3, lines 55-56).

As such, Dance is not seen to teach a cutter head that has an attachment section, nor any body section that has a distal end that is operable to couple to the attachment section of the cutting head. Instead, Dance only teaches that a cutter head may be attached to a ribbon 53 through the external process of brazing.

None of the other cited art is seen to supply what is missing from Dance, and accordingly, independent claim 1 is believed to be allowable over the cited art. Likewise, since independent claim 31 recites an attachment structure for attaching to a body section and independent claim 32 recites a body section connectable to the cutter head, they are also believed to be allowable over the cited art.